

sirable, additional funds must be found. The Committee therefore request that they may be reappointed with the same powers as before, and that the sum of 200*l.* be placed at their disposal.

Report of the Committee, consisting of Professor RAY LANKESTER (Chairman), Professor M. FOSTER, Professor S. H. VINES, and Mr. S. F. HARMER (Secretary), appointed for the purpose of arranging for the occupation of a Table at the Laboratory of the Marine Biological Association at Plymouth.

THE amount of the grant placed at the disposal of the Committee for the present year was 17*l.* 10*s.*, being the unexpended balance of the grant of the previous year.

The Committee have received four applications for the use of a table, but their funds have not allowed them to make more than three nominations, of which one was for a shorter period than was asked for.

They have nominated—

Mr. F. W. Gamble, B.Sc., of Owens College, Manchester, for two months from August 1, 1892.

Mr. Edgar J. Allen, of University College, London, for six weeks from June 3, 1892.

Mr. Gregg Wilson, M.A., B.Sc., Assistant to the Professor of Natural History at the University of Edinburgh, for one month from August 15, 1892.

As has been the case on previous occasions, the Committee have included in the above periods the month which belongs to the Association free of charge.

Mr. Gamble proposes to work at the Turbellarian Fauna of Plymouth Sound and its neighbourhood. Mr. Allen, who is already at Plymouth, intends to use his time there for the study of the development of Decapod Crustacea. Mr. Gregg Wilson proposes to investigate the Food of Fishes.

The Committee expressed the hope in their last report that they would be able to give in their report for this year some account of the results arrived at by the persons who were appointed with the assistance of the grant made at the meeting of the Association in 1890. As these appointments fell within the months July–September 1891 it was obviously impossible to incorporate their results in the last report. The Committee are glad to be in a position to furnish the following information with regard to the results of their expenditure of 12*l.* 10*s.* of the previous grant:—

I. *Report on the Occupation of the Table.*

By Miss FLORENCE BUCHANAN, B.Sc.

Last year, owing to the kindness of the British Association, I was enabled to spend the month of July at the Marine Biological Laboratory at Plymouth. I went down intending to work at some points in the

anatomy of Polychæt worms, and to determine the amount of value to be attached to chætæ and parapodia of homologous segments as a means of classification. I found, however, that I must begin by identifying the different forms occurring at Plymouth, as very little work had been done there on Polychæts up to that time. Seeing that every Polychæt has, on the average, a good many more than half a dozen names, and that each name belongs to about half a dozen different Polychæts, this is no very easy task, and it has occupied me, on and off, since my return from Plymouth in the Zoological Laboratory of University College, London, and I am afraid is not yet complete. I obtained, altogether, over a hundred different species, some of them found, I believe, for the first time on our coast, and a few which seem to be new altogether. With regard to the collection of them, I have to thank my fellow-workers in the laboratory, and especially Mr. Garstang, for much help given me. I must also thank Mr. Cunningham for notes and drawings of some of the Plymouth Polychæts found there up to that time, which he kindly placed at my disposal. With regard to the naming of them, I have received a good deal of assistance from an incomplete and as yet unpublished 'Synonymous List of Polychæt Worms,' by Professor Haddon, which he has kindly put into my hands for revision and completion.

The most interesting of the new forms obtained is a small Eunicid, resembling the genus *Ophryotrocha* of Claparède and Metschnikoff ('Z. f. w. Z.' XIX. p. 184, Pl. XIII. fig. 2) in having the larval ciliated bands persistent in the adult. The shape of the jaws and parapodia (which I propose to figure in giving a full account of this small worm elsewhere), the possession of two pairs of prostomial tentacles instead of only one, and these both provided with stiff hairs not only in the young stages but in the adult, seem to me, however, to mark it off as a distinct genus, although certainly more nearly allied to *Ophryotrocha* than to any other known Annelid. There is a ciliated band on the prostomium, and one on each of the following segments. All the segments after the first two (and the last two or three in small specimens) have well-developed parapodia, each consisting of a chætigerous lobe containing both simple and compound chætæ, and a small cirrus. In the body-cavity and in the parapodia of most of the specimens eggs are to be found, which, curiously enough, like those of *Ophryotrocha*, are generally double, consisting, namely, of a large granular part, of a yellowish-brown colour, containing (in this case, but evidently not in the eggs of *Ophryotrocha*) the nucleus, and a smaller colourless part (containing the nucleus in eggs of *Ophryotrocha*) which stains very deeply with carmine. Whether this smaller part represents a polar body or not remains to be determined. Sections show that at least one pair of excretory organs is present in the shape of small tubes blocked up by yellow concretions lying in the second and third segments and (?) opening at the side of the second to the exterior.

The only other form amongst those I have as yet examined which may rank as a new genus is a member of the family Ampharetea, differing from *Samytha* and *Amage* especially in having a large number of segments (at least thirty-seven) with uncinigerous pinnules behind those with bundles of capillary setæ. It would either form a new genus with the *Samytha pallescens* of Theel ('Kongl. Sv. Vet. Ak. Handlingar,' Bd. XVI.), which he places doubtfully as a *Samytha*, or the genus *Samytha* must be enlarged

to include, not only both these forms, but the genus *Amage* as well; or even both these genera might be swallowed up in the still older genus *Sabellides*.

The other forms I collected at Plymouth I will here only just briefly enumerate in so far as I have at present identified them, leaving any remarks I may have to make on them for publication in the 'M.B.A. Journal,' to which the director has asked me to contribute by degrees an annotated catalogue of the Polychæts occurring near Plymouth. Although I have several specimens of species belonging to the families *Polynoidea*, *Lycoridea*, and *Serpulacea*, I have at present identified so very few of them, except the quite common ones, that I think it best to omit them altogether in the following list. I will mark with an asterisk those forms which I believe not to have been found on the British coast before. A ' ? ' attached to a name signifies either that, after examination, I am not quite satisfied with the identity of the specimen in my possession with the name I have given it, or that the specimen was not complete enough for specific characters to be determined.

Fam. Amphinomea . . .	Euphrosyne foliosa, Aud. and Edw.
Fam. Aphroditea . . .	Aphrodite aculeata, L.
	* „ obtecta, Ehl. (?).
	Hermione hystrix, Sav.
Fam. Eunicea ; Sub-fam.	
Labidognatha . . .	Hyalinoecia tubicola (Müll.), Mgrn.
	Lysidice ninetta, Aud. and Edw.
	Nematonereis unicornis, Schm.
Prionognatha . . .	Lumbriconereis tricolor, Johnst.
	„ gracilis, Ehl.
	* <i>Ophryotrocha</i> -like genus—new.
Fam. Nephthydea . . .	Nephthys cœca, Fabr.
Fam. Glycera . . .	Glycera capitata, Oerst.
Fam. Syllidea . . .	Syllis prolifera, Krohn (<i>asexual and sexual</i> ♀).
	Syllis cornuta, Rthke. (<i>asexual and sexual</i> ♀).
	„ armillaris, Oerst. (?).
	Syllis (Eusyllis) lamelligera, Mar. and Bobr. (?).
	*Syllis, n. sp. (?).
	Amblyosyllis (Gattiola, Johnst.) spectabilis, Johnst.
	Exogone naidina, Oerst. (with laterally attached young).
	*Sylline brevipes, Clp. (?).
	Autolytus prolifer (Müll.), Gr. ♂.
Fam. Nerillidæ . . .	*Nerilla antennata (Schmidt), Clp.
Fam. Hesionea . . .	Castalia (Psammathe, Johnst.) punctata, Müll.
	Castalia arctica, Mgrn.
	*Magalia (Mar. and Bobr.), n. sp.
Fam. Phyllodocea . . .	Phyllodoce lamelligera, Johnst.
	„ maculata, Müll. and Johnst.
	Eulalia viridis (Sav.), Oerst.

Fam. Phyllodocea	.	.	Eulalia bilineata, Johnst.	} Some of these may be new.
			„ punctifera, Gr. (?).	
			or	
			„ Griffithsii, Johnst.	
			„ flava, Oerst. (?).	
			„ problema, Mgrn. (?).	
			* „ lobocephala, Schm. (?).	
			Notophyllum polynoides, Oerst.	
			Genetyllis lutea, Mgrn.	
			*Mysta (Mgrn.), n. sp.	
			Eteone picta, Qfg.	
Fam. Arenicolidæ	.	.	Arenicola marina, L.	
			„ ecaudata, Johnst.	
Fam. Spiodea	.	.	Leucodore ciliatus, Johnst.	
			Scolecoplepis vulgaris, Johnst.	
			Nerine coniocephala, Johnst. (?).	
Fam. Magelonidea	.	.	Magelona (<i>larva in two stages</i>).	
Fam. Chætopterida	.	.	Chætopterus insignis, Baird.	
Fam. Cirratulida	.	.	Dodecaceria concharum, Oerst.	
			Chætozone, sp. (?).	
			Cirratulus borealis, Lam.	
Fam. Terebellacea; Subfam. Amphitritea	.	.	Leprea lapidaria (L.), v. Mrzllr. (include <i>L. tetratrix</i> , Mgrn.).	
			Lanice conchilega (Pall.), Mgrn.	
			Nicolea zostericola, Mgrn., <i>and young</i> .	
			Polymnia nebulosa (Mont.), v. Mrzllr.	
			Thelepus circinnatus (Fabr.), v. Mrzllr.	
			„ sp. (?).	
			Pista cristata (Müll.), Mgrn.	
			*Pista (?), n. sp. (or possibly new genus).	
Polycirridæ	.	.	Polycirrus aurantiacus, Gr.	
			* „ (Aphlebina) hematodes, Clp.	
			* „ „ pallidus, Clp.	
Fam. Ampharetea	.	.	Amphicteis Gunneri, Sars.	
			*Sabellides, n. sp. (?).	
			*Samytha (?), n. sp. (or new genus).	
Fam. Amphictenea	.	.	Pectinaria belgica, Pall.	
Fam. Pherusea	.	.	Siphonostoma diplochætos, Otto.	
Fam. Hermellacea	.	.	Sabellaria alveolata, Lam.	

Although I am otherwise leaving the family Serpulacea unmentioned, I will just note that belonging to the tribe Amphicirridæ I found not only several specimens of *Fabricia*, but also two of *Haplobranchus* (A. G. Bourne), hitherto only known to occur at the mouth of the Thames. These were found in tide-pools not far from the mouth of the Yealm.

With regard to the second object of my visit to Plymouth, namely, to find out how great or how little is the range of variation in homologous parapodia, I collected whilst there a large number of specimens of the only Polychæt obtainable in any great abundance, namely, *Nereis diversicolor*, and have begun making camera drawings of parapodia of certain segments in each specimen.

Of course a list of specimens collected during a month's stay at Plymouth cannot be taken as by any means a complete list of forms occurring there, and, while expressing my thanks to the British Association for so kindly allowing me the use of its table last year, I should like at the same time to express the hope that on some future occasion it will enable me to continue the work, and, having got over the drudgery of mere labelling, to pass on to some of the many interesting morphological problems connected with Polychaets which remain to be worked out.

II. *Report on the Occupation of the Table. Some preliminary notes on the anatomy and habits of Alcyonium digitatum.* By Mr. SYDNEY J. HICKSON, M.A., Fellow of Downing College, Cambridge.

Alcyonium digitatum is one of the most difficult Cœlenterates to kill in a fully expanded condition. In the first place it is only extremely rarely that the large proportion of the polypes of a specimen in an aquarium fully expand themselves, and when they are in that condition the slightest touch or irritation of any part of the colony causes an immediate contraction of the tentacles. Again, when a favourable opportunity arises it is found that all the neutral killing reagents, such as corrosive sublimate, &c., fail to kill the polypes before they have time to partially retract. The only method that gives tolerably satisfactory results is Lo Bianco's No. II. chromo-acetic acid method, and this of course partially dissolves the calcareous spicules.

When a living specimen of an *Alcyonium digitatum* is examined in an aquarium the polypes may frequently be observed in various stages of expansion and retraction. Sometimes all the polypes are completely retracted, but I have never yet observed in any specimen all the polypes fully expanded at the same time. By far the most frequent condition of the *Alcyonium* is one in which a few polypes here and there are fully expanded; others expanded but with their tentacles contracted, and others only just protruding from the surface of the colony.

These two stages are the normal ones that each polype passes through in reaching complete retraction from complete expansion. When the polype is completely expanded both the body-wall and the tentacles are delicate and transparent.

The first stage in the retraction is the contraction of the tentacles. The crown of the polype becomes roughly octagonal in shape with an obtuse solid knob, the contracted tentacle, at each angle.

In the next stage the contracted tentacles bend over towards the mouth, and concurrently with the retraction of the body of the polype they sink into a circular fold of the body-wall.

The invagination of the polype then proceeds at the base until the crown covered by the fold of body-wall sinks below the surface of the colony.

When the crown has sunk below the surface of the colony the aperture is closed by the folding of the delicate body-wall of the base of the polype over the crown; but when the colony enters into a state of complete contraction, as it does, for example, when it is taken out of the water for a few minutes, the tough obtuse surface of the colony contracts over this delicate base, leaving only a star-like slit to mark the position of the retracted polype.